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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,982	09/12/2003	Gerd Jonas	5003073-045US1	6109
29737	7590	12/14/2006		
SMITH MOORE LLP P.O. BOX 21927 GREENSBORO, NC 27420			EXAMINER RABAGO, ROBERTO	
			ART UNIT	PAPER NUMBER

1713

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,982

Applicant(s)

JONAS ET AL.

Examiner

Roberto Rábago

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-21, 23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-21, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/28/2006 has been entered.

2. The declaration of Scott Smith filed 8/28/2006 has been considered.

Prior rejections over Wada and Carrico are withdrawn in view of amendment which describes the polymer as the reaction product of a combination of monomers wherein both monovalent and divalent neutralization agents have been used to partially neutralize the acid-containing monomers. Applicant's use of "monovalent" is understood to refer to the cation portion of the neutralization agent (see specification at page 8); furthermore, in the phrase "monovalent carbonate, or bicarbonate salts" as recited in claims 13 and 21, the term "monovalent" is understood to apply to both carbonate and bicarbonate. The new process limitations within the current claims drafted as product-by-process would be expected to confer structure to the claimed polymer such that the prior references would no longer anticipate the claims. Specifically, the monomers which participate in the reaction which forms the polymer

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must be a combination of monomers having a residual cation from a monovalent neutralizing agent and monomers having a residual cation from a divalent neutralizing agent; furthermore, the combination of monovalent and divalent cationic counterions would necessarily be resident in the polymer which forms the claimed product. Wada does not disclose such monomer mixtures, and Carrico does not recommend neutralization until after the polymerization of acid monomers is complete. The presence of the required counterions during the polymerization reaction would be expected to result in differences in the resultant polymers compared with polymers made from the monomer in the acid form.

Claim Rejections - 35 USC § 112

3. Claims 1-11, 13-21, 23 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Independent claims 1, 13 and 21 (and claims 2-11, 14-20, 23 and 24 by dependency) have been amended to recite a polymer which is the reaction product of unsaturated acid group monomer, internal crosslinker, first neutralization agent, and second neutralization agent. However, the specification does not disclose that this combination of components will produce any polymer. Specifically, the component list which is stated to produce a polymer product (i.e., a polymerization

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reaction is required to take place) lacks the critical component of a polymerization initiator, and therefore the claims are not enabled.

4. ¹¹
~~10~~ Claims 1-~~10~~, 21, 23 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claims 1 and 21 (and claim 2-9, 11 and 24 by dependency) recite that the acidic monomers are at least 20 mol% neutralized by a first agent and at least 5% neutralized by a second agent; therefore, it is not understood how the total level of neutralization can be as low as about 20%.

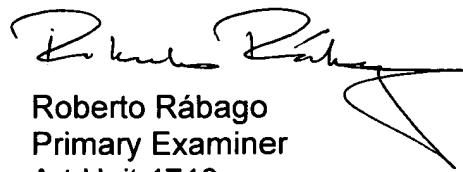
(b) Independent claims 1 and 21 (and claims 2-11, 23 and 24 by dependency) have been amended to recite a polymer which is the reaction product of components a), b), c) and d). However, it cannot be determined whether the stated weight percentages in a) and d) are those present in the reaction system or in the resultant polymer.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberto Rábago whose telephone number is (571) 272-1109. The examiner can normally be reached on Monday - Friday from 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Roberto Rábago
Primary Examiner
Art Unit 1713

RR
December 11, 2006